



State Water Resources Control Board

UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Table with 2 columns: Agency Name, Address, Agency Caseworker, Case No.

Case Information

Table with 2 columns: USTCF Claim No., Global ID, Site Name, Site Address, Responsible Party, Address, USTCF Expenditures to Date, Number of Years Case Open

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611100727

Summary

The Low-Threat Underground Storage Tank (UST) Case Closure Policy (Policy) contains general and media-specific criteria, and cases that meet those criteria are appropriate for closure pursuant to the Policy. This case meets all of the required criteria of the Policy. A summary evaluation of compliance with the Policy is shown in Attachment 1: Compliance with State Water Board Policies and State Law. The Conceptual Site Model upon which the evaluation of the case has been made is described in Attachment 2: Summary of Basic Case Information (Conceptual Site Model). Highlights of the case follow:

The case is an active commercial petroleum fueling facility. An unauthorized leak was reported in April 1991 following the removal of a 1,000-gallon waste oil UST. Subsequently, a 10,000-gallon gasoline/diesel UST and a 12,000-gallon diesel UST were removed in May 1992. During the waste oil UST removal, approximately 7.5 cubic yards of soil were excavated from the UST pit. Bio-sparging has been conducted between July 2008 and February 2011. Since 1998, seven groundwater monitoring wells were installed and monitored. According to groundwater data, water quality objectives were achieved for all constituents of concern.

The petroleum release is limited to the soil and shallow groundwater. The groundwater does not exceed water quality objectives. No public supply wells regulated by the California Department of Public Health are located within 250 feet of the defined plume boundary. An inactive irrigation well is located approximately 100 feet upgradient of the Site. No other water supply wells were identified within 250 feet of the defined plume boundary in the files reviewed. A drainage ditch runs along the western boundary of the Site, but is located more than 250 feet away from the downgradient end of the defined plume boundary. Water is provided to water users near the Site by the City of Ventura Water Department.

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE OFFICER

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, Ca 95812-0100 | www.waterboards.ca.gov



The affected groundwater is not currently being used as a source of drinking water, and it is highly unlikely that the affected groundwater will be used as a source of drinking water in the foreseeable future.

Other designated beneficial uses of impacted groundwater are not threatened and it is highly unlikely that they will be, considering these factors in the context of the site setting. Remaining petroleum hydrocarbon constituents are limited, stable and concentrations declining. Corrective actions have been implemented and additional corrective actions are not necessary. Any remaining petroleum hydrocarbon constituents do not pose significant risk to human health, safety or the environment.

Rationale for Closure under the Policy

- The case meets all of the Policy general criteria.
- Groundwater: The case meets Policy Criterion 1 by Class 1. The groundwater beneath the Site meets water quality objectives and there is no contaminant plume of any length. There is no free product. The nearest water supply well or surface water body is greater than 250 feet from the defined plume boundary. An inactive irrigation well is located approximately 100 feet upgradient of the Site.
- Vapor Intrusion to Indoor Air: The case meets the Policy Exclusion for Active Station. Soil vapor evaluation is not required because the Site is an active commercial petroleum fueling facility.
- Direct Contact and Outdoor Air Exposure: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Table 1 for Commercial/Industrial use, and the concentration limits for a Utility Worker are not exceeded.

Objections to Closure and Response

The County objects to case closure until confirmation soil samples have been collected.

RESPONSE: The soil values are less than soil concentrations in Policy Table 1. Collection of additional data will not change the conceptual site model. No further investigation is necessary. The case meets the Policy criteria.

Determination

Based on the review performed in accordance with Health & Safety Code Section 25299.39.2 subdivision (a), the Fund Manager has determined that closure of the case is appropriate.

Recommendation for Closure

Based on available information, residual petroleum hydrocarbons at the Site do not pose significant risks to human health, safety, or the environment, and the case meets the requirements of the Policy. Accordingly, the Fund Manager recommends that the case be closed. The State Water Board is conducting public notification as required by the Policy. Ventura County has the regulatory responsibility to supervise the abandonment of monitoring wells.

Lisa Babcock
Lisa Babcock, P.G. 3939, C.E.G. 1235

5/7/13
Date

Prepared By: Hari Patel

ATTACHMENT 1: COMPLIANCE WITH STATE WATER BOARD POLICIES AND STATE LAW

The case complies with the State Water Resources Control Board policies and state law. Section 25296.10 of the Health and Safety Code requires that sites be cleaned up to protect human health, safety, and the environment. Based on available information, any residual petroleum constituents at the site do not pose significant risk to human health, safety, or the environment.

The case complies with the requirements of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.¹

<p>Is corrective action consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations? The corrective action provisions contained in Chapter 6.7 of the Health and Safety Code and the implementing regulations govern the entire corrective action process at leaking UST sites. If it is determined, at any stage in the corrective action process, that UST site closure is appropriate, further compliance with corrective action requirements is not necessary. Corrective action at this site has been consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations and, since this case meets applicable case-closure requirements, further corrective action is not necessary, unless the activity is necessary for case closure.</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this case?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>If so, was the corrective action performed consistent with any order?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p><u>General Criteria</u> General criteria that must be satisfied by all candidate sites:</p> <p>Is the unauthorized release located within the service area of a public water system?</p> <p>Does the unauthorized release consist only of petroleum?</p> <p>Has the unauthorized (“primary”) release from the UST system been stopped?</p> <p>Has free product been removed to the maximum extent practicable?</p> <p>Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

¹ Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.
http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf

<p>Has secondary source been removed to the extent practicable?</p> <p>Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?</p> <p>Nuisance as defined by Water Code section 13050 does not exist at the site?</p> <p>Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p><u>Media-Specific Criteria</u> Candidate sites must satisfy all three of these media-specific criteria:</p> <p>1. Groundwater: To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites:</p> <p>Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?</p> <p>Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?</p> <p>If YES, check applicable class: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5</p> <p>For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p>2. Petroleum Vapor Intrusion to Indoor Air: The site is considered low-threat for vapor intrusion to indoor air if site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies.</p> <p>Is the site an active commercial petroleum fueling facility? Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk.</p> <p>a. Do site-specific conditions at the release site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4? If YES, check applicable scenarios: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>

<p>b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?</p> <p>c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p>3. Direct Contact and Outdoor Air Exposure: The site is considered low-threat for direct contact and outdoor air exposure if site-specific conditions satisfy one of the three classes of sites (a through c).</p> <p>a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?</p> <p>b. Are maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?</p> <p>c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>

ATTACHMENT 2: SUMMARY OF BASIC CASE INFORMATION (Conceptual Site Model)

Site Location/ History

- The Site is an active commercial petroleum fueling facility and is bounded by Lirio Avenue to the north, Lirio Extension to the south, and commercial/industrial facilities to the east and west. Agricultural fields are south and west of the Site.
- Seven groundwater monitoring wells have been installed and monitored irregularly since 1998.
- Site map showing the location of the former USTs, monitoring wells and groundwater level contours is provided at the end of this closure review summary.
- Nature of Contaminants of Concern: Petroleum Hydrocarbons only.
- Source: UST System.
- Date Reported: April 1991.
- Status of Release: Replaced.
- Free Product: None Reported.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1	1,000	Waste Oil	Removed	4/29/1991
2	10,000	Gasoline/Diesel	Removed	5/28/1992
3	12,000	Diesel	Removed	5/28/1992
4	15,000	Diesel	Active	---

Receptors

- GW Basin: Santa Clara River Valley – Santa Paula.
- Beneficial Uses: Agricultural Supply, Groundwater Recharge, Industrial Process and Service Supply, Municipal and Domestic Supply.
- Land Use Designation: Commercial.
- Public Water System: Ventura Water Department.
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no public supply wells regulated by the California Department of Public Health within 250 feet of the defined plume boundary. An irrigation well is present approximately 100 feet upgradient of the Site. No other water supply wells were identified within 250 feet of the defined plume boundary in files reviewed.
- Distance to Nearest Surface Water: A drainage ditch runs adjacent to the western edge of the property. This ditch is more than 250 feet from the downgradient edge of the defined plume boundary.

Geology/Hydrogeology

- Stratigraphy: The Site is underlain by sand, gravelly sand, and gravel with minor intervals of silts and clays.
- Maximum Sample Depth: 85 feet below ground surface (bgs).
- Minimum Groundwater Depth: 28.91 feet bgs in monitoring well MW-1.
- Maximum Groundwater Depth: 78.13 feet bgs in monitoring well MW-5D.
- Current Average Depth to Groundwater: Approximately 58 feet bgs.
- Saturated Zones(s) Studied: Approximately 30 - 80 feet bgs.
- Appropriate Screen Interval: Yes.

- Groundwater Flow Direction: West with an average gradient of 0.002 feet/foot (March 2011).

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (3/16/2012)
MW-1	February 1998	23-73	58.11
MW-2	October 1998	19-74	58.47
MW-3	October 1998	19-69	58.38
MW-4	October 1998	19-74	58.88
MW-5S	November 2003	35-55	DRY
MW-5D	November 2003	55-75	60.72
MW-6	June 2007	50-80	58.44

Remediation Summary

- Free Product: None reported in GeoTracker.
- Soil Excavation: 7.5 cubic yards of impacted soil were removed and disposed offsite in April 1991.
- In-Situ Soil/Groundwater Remediation: Bio-Sparging was conducted between July 2008 and February 2011.

Most Recent Concentrations of Petroleum Constituents in Soil

Constituent	Maximum 0-5 feet bgs [mg/kg (date)]	Maximum 5-10 feet bgs [mg/kg (date)]
Benzene	ND (06/26/2007)	ND (06/26/2007)
Ethylbenzene	0.458 (06/26/2007)	0.608 (06/26/2007)
Naphthalene	3.08 (06/26/2007)	5.41 (06/26/2007)
PAHs	NA	NA

NA: Not Analyzed, Not Applicable or Data Not Available

ND: Not Detected

mg/kg: Milligrams per kilogram, parts per million

<: Not detected at or above stated reporting limit

PAHs: Polycyclic aromatic hydrocarbons

Most Recent Concentrations of Petroleum Constituents in Groundwater

Sample	Sample Date	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW-1	03/16/12	<100	<500	<1	<1	<1	<2	<1	<50
MW-2	04/01/09	<100	<500	<1	<1	<1	<2	<1	<50
MW-3	04/01/09	<100	<500	<1	<1	<1	<2	<1	<50
MW-4	04/01/09	<100	<500	<1	<1	<1	<2	<1	<50
MW-5S	04/01/09	<100	<500	<1	<1	<1	<2	<1	<50
MW-5D	03/16/12	<100	<500	<1	<1	<1	<2	<1	<50
MW-6	03/16/12	<100	<500	<1	<1	<1	<2	<1	<50
WQOs	-	--	--	1	150	300	1,750	5^a	1,200^b

NA: Not Analyzed, Not Applicable or Data Not Available

µg/L: Micrograms per liter, parts per billion

<: Not detected at or above stated reporting limit

TPHg: Total petroleum hydrocarbons as gasoline

MTBE: Methyl tert-butyl ether,

TBA: Tert-butyl alcohol

WQOs: Water Quality Objectives, Los Angeles Regional Water Quality Control Board (Regional Water Board) Basin Plan

--: Regional Water Board Basin Plan does not have a numeric water quality objective for TPHg or TPHd

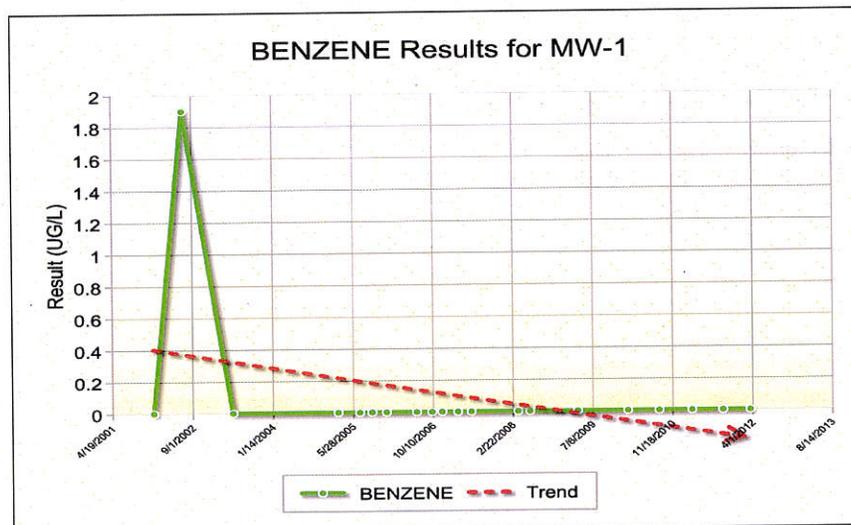
a: Secondary maximum contaminant level (MCL)

b: California Department of Public Health, Response Level

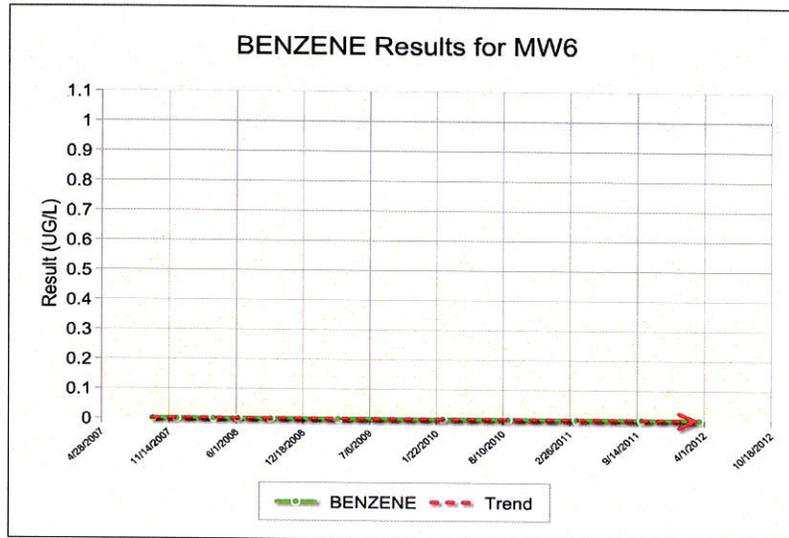
Groundwater Trends

- Benzene trends are shown below: Source Area (MW-1 and MW-6) and Downgradient (MW-5D).

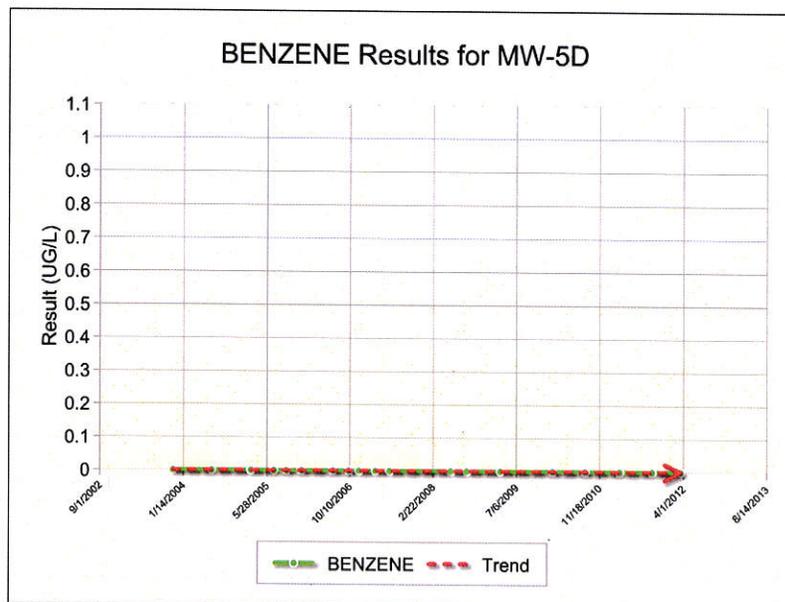
Source Wells



Source Wells



Downgradient Well



Evaluation of Current Risk

- Estimate of Hydrocarbon Mass in Soil: None reported.
- Soil/Groundwater tested for MTBE: Yes, see table above.
- Plume Length: < 100 feet.
- Plume Stability or Decreasing: Yes.
- Contaminated Zone(s) Used for Drinking Water: No.
- Oxygen Concentrations in Soil Vapor: 2.04 percent (September 2011).
- Groundwater: The case meets Policy Criterion 1 by Class 1. The groundwater beneath the Site meets water quality objectives and there is no contaminant plume of any length. There is no free product. The nearest water supply well or surface water body is greater than 250 feet from the defined plume boundary. An inactive irrigation well is located approximately 100 feet upgradient of the Site.

- Vapor Intrusion to Indoor Air: The case meets the Policy Exclusion for Active Station. Soil vapor evaluation is not required because the Site is an active commercial petroleum fueling facility.
- Direct Contact and Outdoor Air Exposure: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Table 1 for Commercial/Industrial use, and the concentration limits for a Utility Worker are not exceeded.

